

Notice of Allowability

Application No.

09/834,830

Examiner

Mark A Mais

Applicant(s)

HEINEN ET AL.

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 29 September 04.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the multiplexing unit, the deserializer, pattern recognition units, phase shifting units, comparator, and analyzing unit must be shown. No new matter should be entered.

2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Allowable Subject Matter

3. Claims 1-12 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

The Examiner has not found a system or method for identifying a known serial data stream, wherein the original serial input stream is sent through a multiplexer, then a deserializer, and then a pattern recognition unit which recognizes a deserialized identifier pattern that corresponds to (a) an identifier pattern within the original serial input stream, and (b) a phase of the deserialized identifier pattern in the deserialized output, causing a phase shift unit take the deserialized output and shift the phase of the deserialized output based on the detected phase of the deserialized identifier pattern--allowing a comparison between a known serial sequence and an expected output signal—and allowing the analyzing unit to analyze the deviation metrics of the deserialized output, thereby cutting down on erroneous interpretations of applied testing.

The nearest art of record, Meija et al. (USP 6,658,363) discloses a multiplexer 302 and deserializer 304 within pattern detector 124' (**fig. 5**). Meija et al. further discloses a testing method (for characterizing the transmission channel, (e.g., BER and other deviation metrics)) wherein a serial stream is input to the device, and, after passing through the multiplexer & deserializer, is compared to a pattern mask 144 (**col. 4, lines 37-44**). Meija et al. does not disclose a phase shifter. Meija (USP 6,680,970) discloses using a phase locked loop for clock recovery (**col. 2, lines 9-24**). However, neither Meija et al., Meija, nor any of the other cited prior art, discloses, teaches, or suggests encoding the serial input stream with an identifier pattern such that, after deserialization & phase shifting, is properly phase-shifted in order to more accurately compare the known serial sequence with an expected output signal.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

(a) Appleton et al. (USP 6,628,621), Multi-channel capable bit error rate test system.

Art Unit: 2664

(b) Lee et al. (USP 6,650,140), Programmable logic device with high speed serial interface circuitry.

(c) Ducaroir et al. (USP 6,167,077), Using multiple high speed serial lines to transmit high data rates while compensating for overall skew.

(d) Shiragaki et al. (6,125,104), USP Network node for switching quality detector to incoming signal specified b7 request message from adjacent node.

(e) Schneider (USP 6,594,275), Fibre channel host bus adapter having multi-frequency clock buffer for reduced power consumption.

(f) Kiratani et al. (USP 4,712,209), Monitoring apparatus capable of monitoring a digital equipment by the use of a synchronization signal.

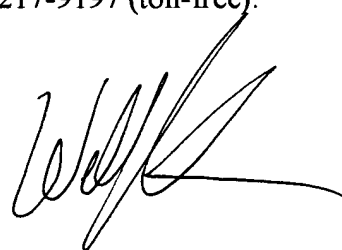
(g) Desai (USP 6,288,656), Receive deserializer for regenerating parallel data serially transmitted over multiple channels.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A Mais whose telephone number is (571) 272-3138. The examiner can normally be reached on 8:00-4:30.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (703) 305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 29, 2004

A handwritten signature in black ink, appearing to be 'W. Chin', is located in the bottom right corner of the page.